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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,657	01/14/2005	Odd Lovhaugen	30316.04015	5126
24/024	7590	04/30/2008		
CALFEE HALTER & GRISWOLD, LLP 800 SUPERIOR AVENUE SUITE 1400 CLEVELAND, OH 44114			EXAMINER RODRIGUEZ, JOSEPH C	
			ART UNIT 3653	PAPER NUMBER
			MAIL DATE 04/30/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/501,657

Applicant(s)

LOVHAUGEN ET AL.

Examiner

JOSEPH C. RODRIGUEZ

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 70,72,73,75-77,79,80,82-86 and 150-159 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 70,72,73,75-77,79,80,82-86 and 150-159 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 77, 79-84, 86, 150 and 156-159 are rejected under 35 U.S.C. 102(e) as being anticipated by Kumar (US 6,795,179).

Kumar (Fig. 1-10) teaches a apparatus and method separating, from a mixture of objects, objects that exhibit a specific characteristic related color of the objects, which characteristic is not detectable by the naked eye or a color camera, comprising advancing said mixture (Fig. 2),

determining, using radiation, whether a portion of said mixture exhibits said characteristic and separating from the mixture the objects exhibiting said characteristic as desired portions of the mixture, wherein said determining comprises analyzing in a plurality of narrow wavelength bands in the visible spectrum (Fig. 2, 4, 6, 8, 10; col. 10, ln. 44-66; col. 14, ln. 4 et seq. teaching subjecting objects to varying laser beam pulses and using spectral analysis obtained from the varied pulses through inputs using spectral filters operating at several narrow wavelength bands to sort objects). Kumar further teaches camera image interpretation (camera 36; col. 6, ln. 26-50; col.

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11, ln. 24-35). Further, Applicant is respectfully reminded that claim language consisting of functional language and/or intended use phrasing is given little, if any, patentable weight as the apparatus must merely be capable of functioning, or being used, as claimed. See MPEP 2112.02, 2114. Here, the apparatus as claimed is certainly capable of determining whether objects are not CMYK-printed objects, or other types of objects (e.g., tinted paper or board). Further, Applicant is respectfully reminded that the material or article (e.g., CMYK-printed object) worked upon by the apparatus does not limit apparatus claims. See MPEP 2115.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 70, 72, 73, 75, 76, 77, 79-80, 82-86 and 150-159 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar in view of Ulrichsen et al. ("Ulrichsen EP")(EP 0 876 852 A1).

Kumar as set forth above teaches all that is claimed except for expressly teaching applying the method applied to specific objects for sorting, such as CMYK-printed object, printed matter or cellulosic material, and analyzing objects using invisible wavelength spectrum as well as specific nanometer bands. The mere application of a

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known sorting method to other types of objects, however, is well-known in the sorting arts. Kumar already teaches a complex neural network system that can be trained to sort any object separable by spectral analysis by simply providing the specific inputs to the spectral analysis system and specifying outputs and also teaches that specific wavelength bands can be selected (col. 15, ln. 65 et seq.). Ulrichsen also teaches that this type of analysis can be applied to a wide range of materials and that both IR or visible light can be used dependent on the type of material to be sorted (col. 6, ln. 9-42). Thus, as the prior art teaches that the spectral analysis system of Kumar is readily adaptable to a variety of objects, the mere application of this method to a specific class of objects cannot be regarded as a solid basis of patentability. That is, one could have applied the known separation technique in the same manner to other objects and the results would have been predictable to one of ordinary skill in the art as this separation technique is part of the ordinary capabilities of one skilled in the art. See MPEP 2143. Further, the prior art discussed and cited demonstrates the level of sophistication of one with ordinary skill in the art and that the modification of applying the sorting method to specific types of material would be well within this skill level. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention of Kumar to sort a variety of objects for the reasons set forth above.

Response to Arguments

Applicant's arguments that the prior art fails to teach the claimed features are unpersuasive. In particular, Applicant focuses on the sorting of CMYK-printed objects as a distinguishing feature. However, as already noted above, the material or article (e.g., CMYK-printed object) worked upon by the apparatus does not limit apparatus claims. Moreover, as noted above, Kumar teaches a sophisticated system that is readily adaptable to sort a wide variety of objects (supra-- teaching complex neural network system that can be trained to sort any object separable by spectral analysis by simply providing the specific inputs to the spectral analysis system and specifying outputs). Applicant has not adequately addressed why it would not be obvious to modify Kumar's teachings to arrive at Applicant's claimed invention when Kumar expressly teaches that his invention is readily adaptable to sort a wide array of objects. Kumar-as well as the other prior art references of record-amply demonstrate that this technological area is quite developed and that the mere sorting of a specific type of object that has not been expressly cited as sort-able is insufficient to achieve patentability. Consequently, the claims stand rejected.

Conclusion

Any references not explicitly discussed above but made of record are considered relevant to the prosecution of the instant application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Joseph C Rodriguez** whose telephone number is 571-

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272-6942 (M-F, 9 am – 6 pm, EST). The Supervisory Examiner is Patrick Mackey, **571-272-6916**. The **Official** fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

The examiner's **UNOFFICIAL Personal fax number** is **571-273-6942**.

Further, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

Status information for published applications may be obtained from either Private PMR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>

Should you have questions on access to the Private PMR system, contact the Electronic Business Center (EBC) at **866-217-9197** (Toll Free).

/Joseph C Rodriguez/
Primary Examiner, Art Unit 3653
Jcr

April 29, 2008